DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit #17
(Wasatch Mountains)
April 2006

BOUNDARY DESCRIPTION

Salt Lake, Summit, Wasatch, Duchesne, Carbon, Utah counties - Boundary begins at the junction of I-15 and I-80 in Salt Lake City; east on I-80 to US-40; south on US-40 to SR-32; east on SR-32 to SR-35; southeast on SR-35 to SR-87; south on SR-87 to Duchesne and US-191; south on US-191 to US-6; northeast on US-6 to I-15; north on I-15 to I-80 in Salt Lake City.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Yearlong range		Summer Range		Winter Range	
Ownership	**Area (acres)**	**%**	**Area (acres)**	**%**	**Area (acres)**	**%**
Forest Service	17268	31.6%	687185	62.0%	104466	21.7%
Bureau of Land Management	**0**	**0%**	**12105**	**1.1%**	**8768**	**1.8%**
Utah State Institutional Trust Lands	**0**	**0%**	**34450**	**3.1%**	**3939**	**.8%**
Native American Trust Lands	**4732**	**8.6%**	**20930**	**1.9%**	**51061**	**10.6%**
Private	**28660**	**52.4%**	**297425**	**26.8%**	**240366**	**50.0%**
Department of Defense	**0**	**0%**	**0**	**0%**	**0**	**0%**
USFWS Refuge	**0**	**0%**	**0**	**0%**	**0**	**0%**
National Parks	**235**	**.4%**	**0**	**0%**	**0**	**0%**
Utah State Parks	**401**	**.7%**	**9153**	**.8%**	**13462**	**2.8%**
Utah Division of Wildlife Resources	**3433**	**6.3%**	**47363**	**4.3%**	**58330**	**12.1%**
TOTAL	**54729**	**100%**	**1108611**	**100%**	**480392**	**100%**

UNIT MANAGEMENT GOALS

- Manage for a population of healthy animals capable of providing a broad range of recreational opportunities, including hunting and viewing.

- Balance deer herd impacts on human needs, such as private property rights, agricultural crops and local economies.

- Maintain the population at a level that is within the short term capability or "carrying capacity" of the available habitat, based on winter range trend studies conducted every five years. Using the long term population objective as a guide, the short term objective will be adjusted according to the Desired Components Index (DCI). If the DCI average for the unit or subunit is within the poor range then the short term objective will be reduced by 20 percent. [The DCI is a measurement of the condition of the big game winter range and relates to the potential "carrying capacity" of big game on that range.

As the DCI changes, the short term population objective may increase or decrease].

POPULATION MANAGEMENT OBJECTIVES

< **Long Term Target Winter Herd Size** – A population of 40,800 wintering deer.

Avintaquin subpopulation: 3,000
Currant Creek subpopulation: 15,000
Wasatch West subpopulation: 20,600
Price River Drainage Divide: 200
Salt Lake subpopulation: 2,000

(See Appendix for subpopulation boundary descriptions)

< **Short Term Objective –** A population of 40,800 wintering deer, assuming suitable evaluations of range trend data during the 5-year life of this plan.

Deer winter range condition on Unit 17, Wasatch Mountains, as indicated by DWR permanent range trend surveys.

SUB-UNIT	DCI Score	Rating Range	Classification	Current(2005) Population	Proposed Objective 2006-2011	Long Term Objective	Percent Change
Avintaquin/ Price River	57	53-70 Good	Fair-Good	1,600	3,200	3,200	0
Currant Creek	50	35-52 Fair	Fair	10,700	15,000	15,000	0
Wasatch West*	52	50-64 Fair	Fair	16,700	20,600	20,600	0
Salt Lake	NA	NA	NA	2,200	2,000	2,000	0

*population objective remains the same because of the DCI survey of 2002. The DCI falls within the Fair category. American Fork Canyon and Hoovers Hollow trend studies were not included because of a fire in the area. These areas fell within a poor range condition but since have had re-vegetative habitat work after the DCI was read.

< Herd Composition – Maintain a three-year region-wide average postseason buck to doe ratio ranging from 15-20:100.

< Harvest - General deer hunt regulations, except for the Salt Lake archery only area. Establishing a hunter cap for the Hunt Unit may be necessary to reach objectives.

POPULATION MANAGEMENT STRATEGIES

Monitoring

< Population Size - Utilizing harvest data, postseason and spring classifications and mortality estimates, a computer model has been developed to estimate winter population size. Wintering populations will be modeled for each subpopulation.

< Buck Age Structure - Monitor age class structure of the buck population through the use of checking stations, postseason classification, uniform harvest surveys and field bag checks.

< Harvest - The primary means of monitoring harvest will be through the statewide uniform harvest survey and the use of checking station data. Achieve the target population size by use of antlerless harvest using a variety of harvest methods and seasons. The winter population should result in an expected annual buck harvest of 4,600 when normal conditions occur. Recognize that buck harvest will be above or below what is expected due to climatic and

productivity variables. Buck harvest strategies will be developed through the RAC and Wildlife Board process to achieve management objectives for buck:doe ratios.

Limiting Factors (May prevent achieving management objectives)

< Crop Depredation - Take all steps necessary to minimize depredation as prescribed by state law and DWR policy.

< Habitat - Winter range forage conditions, public land range availability, and landowner acceptance will determine herd size. Excessive habitat utilization will be addressed.

< Predation - Refer to DWR predator management policy.

- Assess need for control by predator species, geographic area and season of year.

- Seek assistance from Wildlife Services when deer populations are depressed and where there is a reasonable chance of gaining some relief through a predator control effort. Concentrate Wildlife Services control efforts during and immediately prior to the fawning period.

- Recommend cougar harvest to benefit deer while maintaining the cougar as a valued resource in its own right.

< Highway Mortality - Cooperate with the Utah Department of Transportation in construction of highway fences, passage structures and warning signs etc…

< Illegal Harvest - Should illegal kill become an identified and significant source of mortality, attempt to develop specific preventive measures within the context of an “Action Plan” developed in cooperation with the Law Enforcement Section.

HABITAT MANAGEMENT OBJECTIVES

< Maintain and/or enhance forage production through direct range improvements throughout the unit on winter range to achieve population management objectives.

< Work with private landowners and federal, state, local and tribal governments to maintain and protect critical and existing winter range from future losses.

< Provide improved habitat security and escapement opportunities for deer.

HABITAT MANAGEMENT STRATEGIES

< Continue to monitor all permanent range trend studies located throughout the winter range.

< Work cooperatively to utilize grazing, prescribed burning, mechanical and other recognized vegetative manipulation techniques to enhance deer forage quantity and quality.

< Utilize antlerless deer harvest to improve or protect forage when vegetative declines are attributed to deer over-utilization or are expected due to severe weather conditions.

< Cooperate with and provide input to land management planning efforts dealing with management affecting habitat security, quality, and quantity.

PERMANENT RANGE TREND SUMMARIES

Unit 17, Wasatch Mountains/Wasatch West Subunit

There are 29 total permanent winter range trend study sites on this portion of the unit. There are nine sites in the Diamond Fork area, four sites in the Hobble Creek and five in the Timpanogos areas. Some study sites were suspended since the 1997 survey. In 2002, only 9 sites had a higher Desired Components Index figure showing an improvement in habitat quality. The overall DCI rating is "Fair" at 52 down from 57. Olsen (1976) estimated 72,209 acres of severe winter range, a bulk of which is in private ownership and of low productivity. Winter habitat is limited in by quality and quantity. Housing developments in recent years have consumed much of this important winter range and will continue to do so in the future. Most winter range has been reduced to a narrow bench above the communities of Alpine, Pleasant Grove, Orem, Springville and Mapleton. Essential vegetation types monitored include antelope bitterbrush, true mountain mahogany, mixed mountain browse, mixed oakbrush/sagebrush, and Stansbury cliffrose.

There are 11 range trend study sites around the Heber area of the Wasatch Mountains herd unit. All are located within winter range with the majority being on sagebrush-grass type, two on oakbrush type and one on bitterbrush type. The DCI data has increased only on four of the trend sites. Another 4 have only decreased slightly or are unchanged. DCI rating (52) indicates "Fair" habitat. However, the majority of sites have poor quality herbaceous under-story composition with weeds and cheatgrass making up the major portion of the vegetation. This composition is largely due to fires and heavy gazing by livestock in the past. This situation produces abundant fuel during wet years and wildfires are a concern. Much of the winter range (50%) is privately owned and development was a concern at the time of the last study in 2002. Since then, development has accelerated and some of the most critical range is being converted to housing. Division of Wildlife Resources, State Parks as well as federal lands will be the key to the survival of deer into the future on this portion of the unit.

Unit 17, Wasatch Mountains/Salt Lake County, East Bench Subunit

Range trend studies have not been done on this subunit since 1983. Lack of access to trend study plots that have not been destroyed by development has resulted in these studies being abandoned. Very little winter range is available on this subunit and deer are forced to winter in an urban setting during more severe winters.

Unit 17, Wasatch Mountains/Currant Creek Subunit

Winter range is the critical habitat factor on this subunit. Approximately half of the 200,000 acres of winter range is owned and managed by the State while the other half is in private ownership. Most of the privately owned winter range is currently under threat of cabin site & ranchette development (Davis et. al. 1995).

All seven Range Trend study sites on the subunit are located in mule deer winter range. Vegetation varies from Pinyon-Juniper at lower elevations to sagebrush-grass and mountain brush communities at the higher elevations. The most recent data currently available is from the 2005 field season. The DCI score on all of the study sites decreased over the last 5 years. Overall DCI scores for the winter range have decreased by 15% compared to the 2000 data. However, the overall DCI rating for

the subunit is 50 or in Fair-Good condition.

In 2003 prolonged drought conditions resulted in 50%-100% mortality of over 30,000 acres of the lowest elevation, most critical winter range on this sub unit. The sagebrush die off area is represented by only one range trend study site, which has decreased by 30% in its DCI rating over the last ten years. The low elevation sagebrush die-off area is critical to deer on hard winters and needs to continue to be the focus of habitat restoration efforts on this subunit

Unit 17, Wasatch Mountains/Avintaquin Subunit

There are five range trend study sites on the Avintaquin Subunit all of which are located in mule deer winter range. The most recent available study data is from the summer of 2005. Of the three trend sites were monitored in both 2000 and 2005 the overall DCI rating of the winter range decreased by 7%. However, with an average DCI value of 57 the winter range is still rated in Fair-Good condition.

The dominant vegetation types on the winter range of this subunit are mountain brush and pinyon-juniper woodlands. Future treatment of the pinyon-juniper winter ranges may provide more feed and improve the overall quality of the winter range on this subunit. Some wintering of deer and elk occurs as high as 9000 ft. around windblown slopes. Protection of those areas is also important to the deer herd on this subunit (Davis et. al. 1995).

Unit 17, Wasatch Mountains/Price Canyon Subunit

One permanent range trend site exists on the Price Canyon subunit of the Wasatch Mountains. This site is new and was surveyed for the first time in 1994 and again in 2000. The site was selected because of the increased use by deer and elk in that area particularly during the winter months. This site exists at an elevation of 7,400 ft. and is considered upper elevation winter range. Vegetative and soil trends appear to be stable with healthy and productive browse species and high species diversity in the understory.

The predominate species on this site is Basin big sagebrush (*Artemisia tridentata tridentata*). Although sagebrush cover on the range trend site does not appear to be limiting to the grass and forb production, it is limiting in some surrounding areas. Additional forage has been produced by sagebrush treatment in the area with some success. There is potential for expanded sagebrush treatment in the subunit. The DCI data score is 55 or fair, this is down from 80 (good to excellent) in the year 2000.

Duration of Plan

This unit management plan was approved by the Wildlife Board on _____ and will be in effect for five years from that date, or until amended.

APPENDIX

Unit 17-Wasatch Mountains, Avintaquin Subunit

Beginning at Duchesne; then south on Hwy US-191 to the Reservation Ridge Road; westerly and northerly on this road to Big Beaver Springs Road; northerly on this road to Big Beaver Springs and Beaver Canyon; northeasterly along this canyon to the Strawberry River; easterly along this river to Duchesne.

Unit 17-Wasatch Mountains, Currant Creek Subunit

Beginning at Duchesne; then north on Hwy SR-87 to Hwy SR-35; northwesterly on SR-35 to Wolf Creek Pass and the Provo River-Duchesne River drainage divide; south along this drainage divide to Heber Mountain and the Strawberry River-Currant Creek drainage divide; southeast along this divide to Hwy US-40 and the Soldier Creek Dam road; south on this road to the Strawberry River; east along this river to Duchesne.

Unit 17-Wasatch Mountains, Price River Drainage Subunit

Beginning at the junction of Hwy US-191 and the Reservation Ridge road; west on Reservation Ridge road to the Right Fork of the White River road; southwest on this road to Hwy US-6; southeasterly on Hwy US-6 to the junction of US-191; northeasterly on US-191 to the Reservation Ridge road junction.

Unit 17-Wasatch Mountains, Salt Lake Subunit

Beginning at the junction of Hwy I-15 and I-80 in Salt Lake City; then easterly on I-80 to Hwy US-40; southerly on US-40 to the Summit Wasatch county line; southwesterly along this county line to the Salt Lake-Wasatch county line; southwesterly along this county line to the Salt Lake-Utah county line; southwesterly along this county line to I-15; northerly on I-15 to I-80.

Unit 17-Wasatch Mountains, Wasatch West Subunit

Beginning at Hwy I-15 and the Utah-Salt Lake county line; then easterly along this county line to the Utah-Wasatch county line; northerly along this county line to the Wasatch-Summit county line; easterly on this county line to Hwy US-40; westerly on this road to SR-35; east on this road to Wolf Creek Pass and the Provo River-Duchesne River drainage divide; south along this drainage divide to Heber Mountain and the Strawberry River-Currant Creek drainage divide; southeast along this divide to Hwy US-40 and the Soldier Creek Dam road; south on this road to the Strawberry River ; easterly along this river to Beaver Canyon; southwesterly on this canyon to the Reservation Ridge road; southerly on this road to the Right Fork of the White River road; southwesterly on this road to Hwy US-6; westerly on US-6 to I-15; northerly on I-15 to the Salt Lake-Utah county line.